



## Sleepless Nights from the Opioid Epidemic

Vidya Krishnan\*

Division of Critical Care and Sleep Medicine, Case Western Reserve University, USA

### Editorial

It's hard to miss all the recent media coverage of the opioid abuse epidemic. The US Health and Human Services Department estimates that in 2015, 2 million people had a prescription opioid use disorder and 828,000 people used heroin, resulting in over 33,000 people who died in the US from opioid overdose [1]. Drug overdose deaths outnumber deaths due to motor vehicle accidents in the US. Targeted therapies for opioid addiction and measures to reduce the prescription of opioid medications are proposed to fight this national crisis. The CDC has published guidelines for prescribing opioids for chronic pain in patients 18 years and older in primary care settings, in an effort to improve chronic pain management and simultaneously reducing the number of people who misuse, abuse or overdose from these drugs [2]. But clearly, this problem is not going away.

As a physician and a member of this society, I feel compelled to explore what, if anything, we can do as sleep physicians to contribute to the fight against opioid addiction. While it may not be the first-line defense against opioid misuse, we can do our part. First, we can partner with our primary care and pain medicine colleagues to optimize sleep in patients with chronic pain syndromes. Chronic pain is often associated with sleep and fatigue, which can subsequently impair the perception of pain, setting up a vicious cycle. Chronic back pain, for example, can result in difficulty falling asleep, nocturnal awakenings, and microarousals resulting in non-restorative sleep. Opioid medications, of course, are associated with sleep disordered breathing, including central and obstructive sleep apnea (CSA and OSA), which will impair sleep quality. Sleep deprivation has, in turn, been shown to have a negative effect on pain perception in healthy subjects [3]. If providers only address the physical pain of a patient, it is no wonder that the need for opioid prescriptions has increased. Addressing the contributing comorbidities such as the sleep deprivation, insomnia, and sleep disordered breathing may be a valuable intervention to minimize opioid prescription for pain control.

Second, despite our efforts to educate the public about the harms of obstructive sleep apnea, it remains a grossly under diagnosed disorder. Prevalence estimates of moderate to severe OSA (with AHI  $\geq 5$ ) from the Wisconsin Cohort Study are on the order of 3% to 17% in US adults age 30-70 years old [4]. With an increase in obesity and an aging US population, the true prevalence is likely to be higher. There is also a clear link between opioid use and sleep disordered breathing (SDB), both OSA and CSA. While OSA prevalence is likely to be high in the patient population using opioids, the use of opioids is more likely to contribute to the development of CSA in a dose-dependent fashion. Management of opioid-associated SDB entails addressing the need for opioids, reducing the dose of opioids (if possible), and exploring alternative treatments for pain. Our treatment of CSA has advanced significantly with the use of adaptive servo ventilation. The effect of these interventions on longer term outcomes needs to be studied further. But while the scenarios of opioid abuse outside the hospital and opioid use in a controlled hospital setting are not the same, there is some information that can be extrapolated from the literature on perioperative care of patients with OSA. The subset of patients with OSA with reduced chemoreflex responsiveness and higher arousal threshold appear to be the patients at highest risk for post-operative cardiopulmonary complications [5]. If OSA may be contributing to the high case fatality rate of opioid use in the general population, identification and treatment of OSA may at least mitigate this association. This is much easier said than done – the target population here is one with less healthcare follow-up, less adherence to prescribed medical therapies, and psychosocial factors that impede any interventions that may improve their own well-being.

There is no question that the real battles in this opioid abuse crisis will be by the users themselves seeking help, overcoming their addictions, and creating a psychosocial network of support for each other. But as healthcare providers, we must do our duty to protect our patients. Emerging research fields in sleep medicine, such as the association between sleep and chronic pain management, perioperative management of OSA, and opioid induced sleep disorders, all become more relevant to

### OPEN ACCESS

#### \*Correspondence:

Vidya Krishnan, Division of Critical Care and Sleep Medicine, Case Western Reserve University, MetroHealth Campus, OH, USA, Tel: (216) 778-3441; Fax: (216) 778-3240; E-mail: vkrishnan@metroheath.org

Received Date: 29 Jun 2017

Accepted Date: 12 Jul 2017

Published Date: 20 Jul 2017

#### Citation:

Krishnan V. Sleepless Nights from the Opioid Epidemic. *Ann Sleep Med Res.* 2017; 1(1): 1004.

Copyright © 2017 Krishnan V. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

the fight against the opioid epidemic in the US.

## References

1. <https://www.hhs.gov/opioids/about-the-epidemic/>.
2. Houry D, Baldwin G. Announcing the CDC guideline for prescribing opioids for chronic pain. *J Safety Res.* 2016;57:83-4.
3. Schrimpf M, Liegl G, Boeckle M, Leitner A, Geisler P, Pieh C. The effect of sleep deprivation on pain perception in healthy subjects: a meta-analysis. *Sleep Med.* 2015;16(11):1313-20.
4. Peppard PE, Young T, Barnet JH, Palta M, Hagen EW, Hla KM. Increased prevalence of sleep-disordered breathing in adults. *Am J Epidemiol.* 2013;177(9):1006-14.
5. Lam KK, Kunder S, Wong J, Doufas AG, Chung F. Obstructive sleep apnea, pain, and opioids: is the riddle solved? *Curr Opin Anaesthesiol.* 2016;29(1):134-40.